

**CITY OF DANVILLE
PROJECT DESCRIPTION
FY 2015 FIVE-YEAR CIP**

Project Title: Sandy Creek Sewer Collector Improvements **Department:** Public Works
140
Division: Sanitation
277
Section: Sewers (Public Works) 8 Fund:51

Description:

This project is for the reconstruction of various segments of collector sewers in the Sandy Creek Drainage Basin that are failing and have required emergency repairs.

Justification:

Funding to reconstruct various sewer lines in the Sandy Creek Drainage Basin will decrease sewer maintenance costs. Study: 2013 Sewer System Inflow and Infiltration Evaluation Report.

Comments:

N/A

CITY OF DANVILLE
PROJECT DESCRIPTION
FY 2015 FIVE-YEAR CIP

Project Title: Sandy Creek Sewer Collector Improvements

Department: Public Works
140

Division: Sanitation
277

Section: Sewers (Public Works) 8 Fund:51

Project Cost/Funding Sources:

	<u>Prior Years</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019</u>	<u>Total</u>
Utility Fund Revenues	-	-	-	-	\$800,000	-	\$800,000
Project Totals:	-	-	-	-	\$800,000	-	\$800,000

Goals/Milestones:

FY 2018	Reconstruct various sewer lines in the Sandy Creek Drainage Basin.
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**CITY OF DANVILLE
PROJECT DESCRIPTION
FY 2015 FIVE-YEAR CIP**

Project Title: Old 97 Basin Sewer Line Replacement

Department: Public Works
140

Division: Sanitation
277

Section: Sewers (Public Works) 8 Fund:51

Description:

This project is the reconstruction of 6,300 feet of 12-inch sanitary sewer which is in need of replacement between Henry Street and North Main Street.

Justification:

The Old 97 basin sewer reconstruction will increase sewer capacity and reduce infiltration of groundwater. The City is reconstructing old inadequate sewer main interceptors.

Comments:

Study: 2013 Sanitary Sewer System Inflow and Infiltration Evaluation Report.

**CITY OF DANVILLE
PROJECT DESCRIPTION
FY 2015 FIVE-YEAR CIP**

Project Title: Old 97 Basin Sewer Line Replacement

Department: Public Works
140

Division: Sanitation
277

Section: Sewers (Public Works) 8 Fund:51

Project Cost/Funding Sources:

	<u>Prior Years</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019</u>	<u>Total</u>
Utility Fund Revenues	-	-	\$700,000	-	-	-	\$700,000
Project Totals:	-	-	\$700,000	-	-	-	\$700,000

Goals/Milestones:

FY 2016	Reconstruct sanitary sewer lines.
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**CITY OF DANVILLE
PROJECT DESCRIPTION
FY 2015 FIVE-YEAR CIP**

Project Title: Apple Branch Sewer Line Replacement

Department: Public Works
140

Division: Sanitation
277

Section: Sewers (Public Works) 8 Fund:51

Description:

This project is to reconstruct 4,700 feet of 12-inch sewer line which is in need replacement. It is located on the Apple Branch stream from Guilford Street to Orchard Drive.

Justification:

The Apple Branch Sewer Reconstruction will increase sewer capacity and reduce infiltration of groundwater. The City is reconstructing old inadequate sewer main interceptors.

Comments:

Study: 2013 Sewer System Inflow and Infiltration Evaluation Report.

**CITY OF DANVILLE
PROJECT DESCRIPTION
FY 2015 FIVE-YEAR CIP**

Project Title: Apple Branch Sewer Line Replacement

Department: Public Works

140

Division: Sanitation

277

Section: Sewers (Public Works) 8 Fund:51

Project Cost/Funding Sources:

	<u>Prior Years</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019</u>	<u>Total</u>
Utility Fund Revenues	-	-	-	\$700,000	-	-	\$700,000
Project Totals:	-	-	-	\$700,000	-	-	\$700,000

Goals/Milestones:

FY 2017	Reconstruct sanitary sewer lines.
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**CITY OF DANVILLE
PROJECT DESCRIPTION
FY 2015 FIVE-YEAR CIP**

Project Title: Pumpkin Creek Sewer Line Replacement

Department: Public Works
140

Division: Sanitation
277

Section: Sewers (Public Works) 8 Fund:51

Description:

Phase III - This project is for the reconstruction of 5,000 feet of 18-inch sanitary sewer which is in need of replacement located on Pumpkin Creek between Route 29 Bypass and the Dan River.

Justification:

The Pumpkin Creek sewer reconstruction will increase sewer capacity and reduce infiltration of groundwater. The City is focusing on reconstructing old inadequately sized sewer main interceptors.

Comments:

Study: 2013 Sewer System Inflow and Infiltration Evaluation Report.

**CITY OF DANVILLE
PROJECT DESCRIPTION
FY 2015 FIVE-YEAR CIP**

Project Title: Pumpkin Creek Sewer Line Replacement

Department: Public Works
140

Division: Sanitation
277

Section: Sewers (Public Works) 8 Fund:51

Project Cost/Funding Sources:

	<u>Prior Years</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019</u>	<u>Total</u>
Utility Fund Revenues	\$1,600,000	\$800,000	-	-	-	-	\$2,400,000
Project Totals:	\$1,600,000	\$800,000	-	-	-	-	\$2,400,000

Goals/Milestones:

FY 2015	Phase III - Replace 5,000 feet of 18-inch sewer line from Route 29 Bypass to the South Bank Interceptor.
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**CITY OF DANVILLE
PROJECT DESCRIPTION
FY 2015 FIVE-YEAR CIP**

Project Title: New Sewer Lines/Inflow & Infiltration
Reduction

Department: Public Works
140

Division: Sanitation
277

Section: Sewers (Public Works) 8 Fund:51

Description:

This project is for short sanitary sewer extensions to serve areas in the City presently without sewer service which meet the City's extension guidelines. This project also provides funds for annual inspection and engineering costs for sewer projects and addressing sewer inflow and infiltration reduction studies and projects.

Justification:

Requests from property owners for sanitary sewer extensions are funded by this project. Increased sewer availability is provided and also reduction in sewer inflow and infiltration.

Comments:

Study: 2013 Sewer System Inflow and Infiltration Evaluation Report.

**CITY OF DANVILLE
PROJECT DESCRIPTION
FY 2015 FIVE-YEAR CIP**

Project Title: New Sewer Lines/Inflow & Infiltration Reduction

Department: Public Works
140

Division: Sanitation
277

Section: Sewers (Public Works) 8 Fund:51

Project Cost/Funding Sources:

	<u>Prior Years</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019</u>	<u>Total</u>
Utility Fund Revenues	-	\$200,000	\$200,000	\$250,000	\$250,000	\$250,000	\$1,150,000
Project Totals:	-	\$200,000	\$200,000	\$250,000	\$250,000	\$250,000	\$1,150,000

Goals/Milestones:

FY 2015	Design and construct sewer line extension as petitioned / I & I reduction.
FY 2016	Design and construct sewer line extension as petitioned / I & I reduction.
FY 2017	Design and construct sewer line extension as petitioned / I & I reduction.
FY 2018	Design and construct sewer line extension as petitioned / I & I reduction.

**CITY OF DANVILLE
PROJECT DESCRIPTION
FY 2015 FIVE-YEAR CIP**

Project Title: Luna Lake Road Sewers

Department: Public Works

140

Division: Sanitation

277

Section: Sewers (Public Works) 8 Fund:51

Description:

This project is the construction of 5,000 feet of sanitary sewer lines to serve residences and businesses in the Luna Lake Road area.

Justification:

This City is extending sewer to serve additional areas which will increase sewer availability.

Comments:

Study: City's 1989 Sewer Needs Assessment Study.

**CITY OF DANVILLE
PROJECT DESCRIPTION
FY 2015 FIVE-YEAR CIP**

Project Title: Luna Lake Road Sewers

Department: Public Works
140

Division: Sanitation
277

Section: Sewers (Public Works) 8 Fund:51

Project Cost/Funding Sources:

	<u>Prior Years</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019</u>	<u>Total</u>
Utility Fund Revenues	-	-	-	-	-	\$700,000	\$700,000
Project Totals:	-	-	-	-	-	\$700,000	\$700,000

Goals/Milestones:

FY 2019	Construction of sanitary sewer lines.
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**CITY OF DANVILLE
PROJECT DESCRIPTION
FY 2015 FIVE-YEAR CIP**

Project Title: Pumpkin Creek Tributary Sewer Line

Department: Public Works
140

Division: Sanitation
277

Section: Sewers (Public Works) 8 Fund:51

Description:

This project is for construction of 3,000 feet of 15-inch sanitary sewer along a tributary of Pumpkin Creek to serve houses and businesses on the south side of the Route 29 Bypass along Goodyear Blvd. near Twin Oaks Drive.

Justification:

The City is extending sewers to additional areas to provide increased sewer availability.

Comments:

Study: City's 1989 Sewer Needs Assessment Study.

**CITY OF DANVILLE
PROJECT DESCRIPTION
FY 2015 FIVE-YEAR CIP**

Project Title: Pumpkin Creek Tributary Sewer Line

Department: Public Works
140

Division: Sanitation
277

Section: Sewers (Public Works) 8 Fund:51

Project Cost/Funding Sources:

	<u>Prior Years</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019</u>	<u>Total</u>
Utility Fund Revenues	-	-	-	-	-	\$800,000	\$800,000
Project Totals:	-	-	-	-	-	\$800,000	\$800,000

Goals/Milestones:

FY 2019	Construction of sanitary sewer lines.
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**CITY OF DANVILLE
PROJECT DESCRIPTION
FY 2015 FIVE-YEAR CIP**

Project Title: Sewer Line Reconstruction

Department: Public Works
140

Division: Sanitation
277

Section: Sewers (Public Works) 8 Fund:51

Description:

This project is the reconstruction of various sewer lines that have major structural defects due to the age of the lines. These projects are heavily dependent on discovery of deteriorated sewer during routine sewer maintenance. Some projects require funding over multiple years and cannot be predicted.

Justification:

This project provides funding for projects that will decrease sewer maintenance costs. The department makes repairs on sanitary sewers found to be leaking or deteriorated. This is mandated by the DEQ Consent Order to reduce infiltration/exfiltration.

Comments:

Study: 2013 Sewer System Inflow and Infiltration Evaluation Report.

**CITY OF DANVILLE
PROJECT DESCRIPTION
FY 2015 FIVE-YEAR CIP**

Project Title: Sewer Line Reconstruction

Department: Public Works
140

Division: Sanitation
277

Section: Sewers (Public Works) 8 Fund:51

Project Cost/Funding Sources:

	<u>Prior Years</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019</u>	<u>Total</u>
Utility Fund Revenues	-	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$1,250,000
Project Totals:	-	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$1,250,000

Goals/Milestones:

FY 2015	Repairs to existing sanitary sewers.
FY 2016	Repairs to existing sanitary sewers.
FY 2017	Repairs to existing sanitary sewers.
FY 2018	Repairs to existing sanitary sewers.
FY 2019	Repairs to existing sanitary sewers.

**CITY OF DANVILLE
PROJECT DESCRIPTION
FY 2015 FIVE-YEAR CIP**

Project Title:	Northside Plant Process Modifications Phase III	Department:	Utilities 165
		Division:	Water & Wastewater Treatment 409
		Section:	Wastewater Treatment 11 Fund:51

Description:

Phase III consists of the installation of dual grit removal facilities.

Justification:

Currently the plant has no grit removal facilities. These improvements will extend the life of the plant pumping equipment and allow the grit to be handled separately from the material removed from the other treatment processes.

Comments:

Prior phases of modifications:

Phase I: conversion from pure oxygen to conventional activated sludge.

Phase II: convert dissolved air flotation units into high rate primary clarifiers.

**CITY OF DANVILLE
PROJECT DESCRIPTION
FY 2015 FIVE-YEAR CIP**

Project Title: Northside Plant Process Modifications Phase
III

Department: Utilities
165

Division: Water & Wastewater Treatment
409

Section: Wastewater Treatment 11 Fund:51

Project Cost/Funding Sources:

	<u>Prior Years</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019</u>	<u>Total</u>
Utility Fund Revenues	\$400,000	-	\$300,000	\$1,000,000	\$400,000	\$400,000	\$2,500,000
Project Totals:	\$400,000	-	\$300,000	\$1,000,000	\$400,000	\$400,000	\$2,500,000

Goals/Milestones:

FY 2016	Start design of grit removal facilities at the NSWWTP.
FY 2017	Complete design of grit removal facilities at the NSWWTP.
FY 2018	Grit removal facilities at the NSWWTP - bid the project.
FY 2019	Award bid and start and complete construction of grit removal facilities at the NSWWTP.

**CITY OF DANVILLE
PROJECT DESCRIPTION
FY 2015 FIVE-YEAR CIP**

Project Title: NSWWTP Full SCADA Implementation

Department: Utilities

165

Division: Water & Wastewater Treatment

409

Section: Wastewater Treatment 11 Fund:51

Description:

Expand existing SCADA system to monitor and operate the entire NSWWTP. This will include the following equipment: (1) influent raw wastewater pumps, (2) all chemical feeders, (3) return sludge pumps, (4) waste sludge pumps, (5) chlorine feeders and (6) sulfur dioxide feeders.

Justification:

This will allow better control of plant processes and provide more efficient operation.

Comments:

N/A

**CITY OF DANVILLE
PROJECT DESCRIPTION
FY 2015 FIVE-YEAR CIP**

Project Title: NSWWTP Full SCADA Implementation

Department: Utilities
165

Division: Water & Wastewater Treatment
409

Section: Wastewater Treatment 11 Fund:51

Project Cost/Funding Sources:

	<u>Prior Years</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019</u>	<u>Total</u>
Utility Fund Revenues	-	\$50,000	\$150,000	-	-	-	\$200,000
Project Totals:	-	\$50,000	\$150,000	-	-	-	\$200,000

Goals/Milestones:

FY 2015	Expand existing SCADA system to include all pumping equipment (raw, RAS, WAS, Southside pumps), chemical feeders, some monitoring functions. Install as funds are available. First location will be the six raw pumps.
FY 2016	Complete SCADA system installation for rest of equipment. Complete as funds are available.

**CITY OF DANVILLE
PROJECT DESCRIPTION
FY 2015 FIVE-YEAR CIP**

Project Title: NSWWTP Clarifier No. 2 Rehabilitation

Department: Utilities
165

Division: Water & Wastewater Treatment
409

Section: Wastewater Treatment 11 Fund:51

Description:

Rehabilitation of Clarifier No. 2 at the Northside Wastewater Treatment Plant (NSWWTP). This will include replacing the following equipment and materials: weirs, scum baffle, scum baffle landing, center turntable, catwalk, sludge scraper mechanism and baffle curtains.

Justification:

The equipment is worn and has been patched as much as possible. A complete rebuild is necessary to insure adequate operation.

Comments:

This is the last of four clarifiers that had to be rebuilt.

**CITY OF DANVILLE
PROJECT DESCRIPTION
FY 2015 FIVE-YEAR CIP**

Project Title: NSWWTP Clarifier No. 2 Rehabilitation

Department: Utilities

165

Division: Water & Wastewater Treatment

409

Section: Wastewater Treatment 11 Fund:51

Project Cost/Funding Sources:

	<u>Prior Years</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019</u>	<u>Total</u>
Utility Fund Revenues	-	\$300,000	-	-	-	-	\$300,000
Project Totals:	-	\$300,000	-	-	-	-	\$300,000

Goals/Milestones:

FY 2015	Rebuild Clarifier No. 2 which will include the following: weirs, baffles, catwalk, center turntable rebuild, sludge scraper mechanism, influent baffle curtains, scum trough and some concrete repair.
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